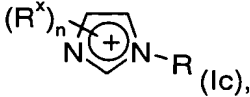
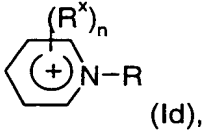
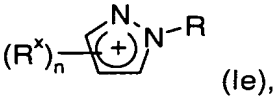
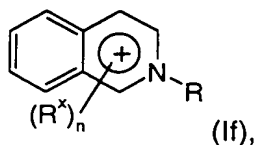


We claim:

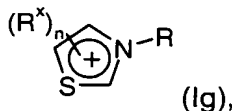
1. A process for the extractive removal of optionally substituted phenol, 3-hydroxypyrazole, 2-hydroxypyridine, hydroquinone, resorcinol, catechol; C₁-C₂₀-alcohol, glycol, glycerol, optionally substituted aniline, N-C₁-C₂₀-alkylamine, N,N-di-C₁-C₂₀-alkylamine, P-C₁-C₂₀-alkylphosphine, P,P-di-C₁-C₂₀-alkylphosphine, phenylphosphine, diphenylphosphine, hydrazine, hydroxylamine, sulfonic acid, sulfinic acid, phosphoric acid, carboxylic acid or amino acid from aprotic solvents by means of ionic liquids of the formula $[K]_n^+[A]^{n-}$,
 where
 n is 1, 2 or 3;
 [K]⁺ is selected from the group consisting of:
- quaternary ammonium cations of the formula $[NR^1, R^2, R^3, R^4]^+$ (Ia),
 - quaternary phosphonium cations of the formula $[PR^1, R^2, R^3, R^4]^+$ (Ib),
 where
 R¹, R², R³, R⁴ are each C₁-C₁₂-alkyl or phenyl-C₁-C₄-alkyl,
 where the aliphatic radicals may bear from 1 to 4 substituents selected from the group consisting of halogen, amino, cyano, C₁-C₄-alkoxy and the phenyl ring may bear the abovementioned substituents and also C₁-C₆-alkyl, carboxylate and sulfonate groups;
 R¹ and R² may together form a C₄-C₅-alkenylene radical which may be substituted by C₁-C₄-alkyl, halogen, cyano or C₁-C₄-alkoxy;
 - imidazolium cations of the formula,
 (Ic),
 - pyridinium cations of the formula,
 (Id),
 - pyrazolium cations of the formula,
 (Ie),
 - quinolinium cations of the formula,

AMENDED SHEET

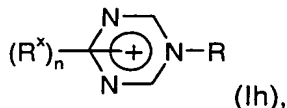
23



- thiazolium cations of the formula,



- triazinium cations of the formula,



where the index n and the substituents R and R^x have the following meanings:

n is 0, 1, 2, 3 or 4;

R is hydrogen, C₁-C₁₂-alkyl or phenyl-C₁-C₄-alkyl, where the aliphatic radicals may bear from 1 to 4 substituents selected from the group consisting of halogen, amino, cyano, C₁-C₄-alkoxy and the phenyl ring may bear the abovementioned substituents and also C₁-C₆-alkyl, carboxylate and sulfonate groups;

R^x is C₁-C₆-alkyl, halogen, amino, cyano, C₁-C₄-alkoxy, carboxylate or sulfonate;

[A]ⁿ⁻ is the partly or fully deprotonated anion of an inorganic or organic protic acid H_nA (III), where n is a positive integer and indicates the charge on the anion.

- The process according to claim 1, wherein the organic compound to be extracted is a phenol or alcohol.
- The process according to claim 1 or 2, wherein the aprotic solvent is a hydrocarbon.
- The process according to any of claims 1 to 3, wherein the hydrocarbon is an alkane or halogenated alkane.

- The process according to any of claims 1 to 3, wherein the hydrocarbon is an

AMENDED SHEET

arene which is optionally substituted by halogen, nitro, cyano, C₁-C₃-alkyl, C₁-C₃-alkoxy or methoxycarbonyl.

- 5 6. The process according to any of claims 1 to 5, wherein the ionic liquid is an ammonium or imidazolium salt or a mixture of these salts.
7. The process according to any of claims 1 to 6, wherein the ionic liquid is a sulfate or hydrogensulfate.
- 10 8. The process according to claim 1, 6 or 7, wherein a phenol is removed from chlorobenzene.
9. The process according to any of claims 1 to 8, wherein the extracted impurity is separated off from the ionic liquid by distillation.
- 15 10. The process according to any of claims 1 to 8, wherein the extracted impurity is separated off from the ionic liquid by reextraction.